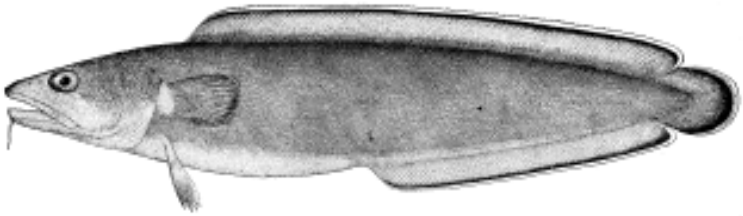

Last Revised: January 2000

Summary Status

Landings and Abundance Trends

Landings Data

PDF version

Cusk

by
Loretta O'Brien

The cusk, *Brosme brosme*, is a deepwater species that is found in rocky, hard bottom areas throughout the Gulf of Maine. Spawning occurs in spring and early summer; eggs rise to the surface where hatching and larval development occur. Juveniles move to the bottom at about 5 cm (2 in.) in length, where they become sedentary and rather solitary in habit. Individuals commonly attain lengths up to 90 cm (35 in.) and weights up to 9.0 kg (20 lb). The stock structure of cusk is unknown. Although little information is available for Gulf of Maine fish, cusk from the Scotian Shelf area are relatively slow growing and late maturing. Scotian Shelf cusk reach a maximum age greater than 14 years and attain sexual maturity by ages 5 (males) and 7 (females).

The principal fishing gears used to catch cusk are line trawl, otter trawl, gill net, and longline. Fish caught by these gears range in size from 35 cm (13.8 in.) to 110 cm (43.3 in.). Recreational fishing is insignificant and foreign catches are minor. The fishery is not under management. Total catches in 1998 were 495 mt, 16% less than in 1997, and the lowest in the time series.

During the late 1960s and early 1970s, annual landings were relatively stable at about 1,700 mt per year, but increased in the late 1970s to early 1980s, peaking at 3,800 mt in 1981. Landings subsequently declined to 1,500 mt in 1988, then increased to 2,400 mt in 1992, and have declined to a record low of 500 mt in 1998. Prior to 1993, 60 to 80% of the U.S. catch was taken from the Gulf of Maine. The 1998 U.S. landings were 354 mt and accounted for 72% of the total harvest. Canadian landings in 1998 were 140 mt. Almost all Canadian landings have been taken on Georges Bank.

Historically, otter trawls have accounted for between 50% and 87% of annual U.S. cusk landings. During 1992-1994, the majority of the landings were by bottom long-line gear, also known as line trawls. Otter trawls and line trawls together accounted for most of the landings during 1995-1998.

Although the NEFSC autumn bottom trawl survey biomass index has fluctuated considerably, a declining trend has been evident since the late 1960s. The1998 index is near zero and is the

record low. The mean length of cusk caught on the survey has also declined, from a long-term average of 62 cm during 1964-1987 to 50 cm during 1988-1998.

Annual landings have generally declined since 1981, while survey indices of abundance have generally declined since 1985. The ratio of landings to survey indices has been increasing since 1986, implying increased exploitation. The stock appears to be overexploited and at a low biomass level.

For further information

Bigelow, H. B., and W. C. Schroeder. 1953. Fishes of the Gulf of Maine. Fish. Bull., U.S. Fish. Wildl. Serv. 74:53.

Oldham, W. S. 1972. Biology of Scotian Shelf cusk, *Brosme brosme*. ICNAF Res. Bull. 9: 85-98.

Summary Status

Long-term potential catch (MSY)	=	Unknown
Biomass corresponding to MSY	=	Unknown
Minimum biomass threshold	=	N/A
Stock biomass in 1998	=	Low
F_{MSY}	=	N/A
F_{TARGET}	=	N/A
Overfishing definition	=	N/A
F_{1998}	=	Unknown
Age at 50% maturity	=	4.7 years, males 6.6 years, females
Size at 50% maturity	=	43.5 cm (17.1 in.), males 50.7 cm (19.9 in.), females
Assessment level	=	Index
Management	=	None

M=Unknown **$F_{0.1}$= Unknown** **F_{max} = Unknown**

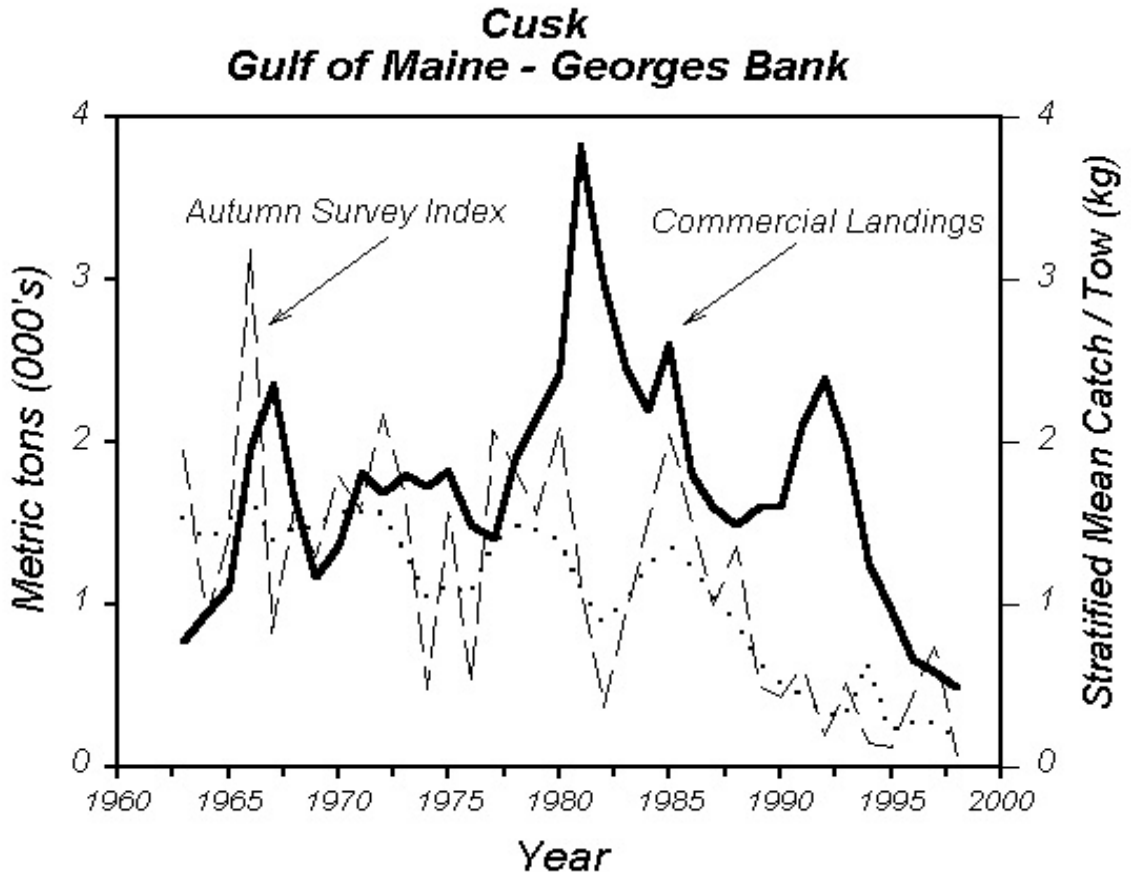

Table 18.1 Recreational catches and commercial landings (thousand metric tons)]

	Year										
Category	**1979-88 average**	**1989**	**1990**	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**
U.S. recreational	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Commercial											
United States	1.7	0.9	1.2	1.5	1.6	1.4	1.1	0.8	0.5	0.4	0.4
Canada	0.6	0.7	0.5	0.6	0.8	0.6	0.2	0.2	0.2	0.2	0.1
Other	-	-	-	-	-	-	-	-	-	-	-
Total nominal catch	2.3	1.6	1.7	2.1	2.4	2.0	1.3	1.0	0.7	0.6	0.5